


ACN

MEMORANDUM

INTERMOUNTAIN POWER SERVICE CORPORATION

TO: S. Gale Chapman  PAGE 1 OF 2
FROM: Dennis K. Killian
DATE: July 11, 1991
SUBJECT: Burner Design Evaluation Services
(RJM Corp's review of B&W's proposed design)
FILE: 01.03.03, 14.9010

Please approve the attached purchase requisition for RJM Corporation to proceed with the engineering design evaluation of Babcock and Wilcox's proposed burner upgrade. **Total estimated cost of the third party evaluation is \$46,200.**

Due to IPSC's concerns with B&W's proposed burner design upgrade not addressing the heart of the burner deficiencies, IPSC is recommending an outside consultant to assist in the burner design review and providing third party support for air flow and finite element modeling.

The goal is to keep B&W's proposed burner design intact, as much as possible, to mitigate warranty and guarantee issues while attempting to resolve the outstanding burner issues. These key burner issues are listed on the attached summary.

The burner design evaluation will consist of the following:

1. Conduct Mechanical Design Evaluation \$27,000
 - a. Develop CAD model of burner
 - b. Conduct finite element analysisObjective: • Minimize thermal expansion related damage to the burners.
2. Conduct 2-dimensional axisymmetric air flow model \$9,000

Objectives: • Establish proper swirl characteristics.
• Determine outer register, inner register and backplate position settings to meet air flow requirements.
3. Design Coal Flame Stabilizer \$7,200

Objectives: • Determine flame stabilizer design requirements and incorporate into mechanical design evaluation, air flow model and NOx evaluation.

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4. Conduct NOx emissions evaluation \$1,000
Objectives: • Conduct NOx combustion evaluation to ensure
recommendations on modifications to the burners do not
increase NOx emission levels.

ESTIMATED COSTS for burner design evaluations	\$44,200
plus travel for meetings requested by IPSC	<u>\$ 2,000</u>
TOTAL	\$46,200

Please reference the attached purchase requisition and June 17, 1991,
Report from RJM on their initial evaluation of IGS's burners.
Also attached is RJM literature on modeling and testing services.

Please contact Jerry Hintze or Aaron Nissen if you have further
questions concerning this matter.

JKH
AEN:dh
Attachments